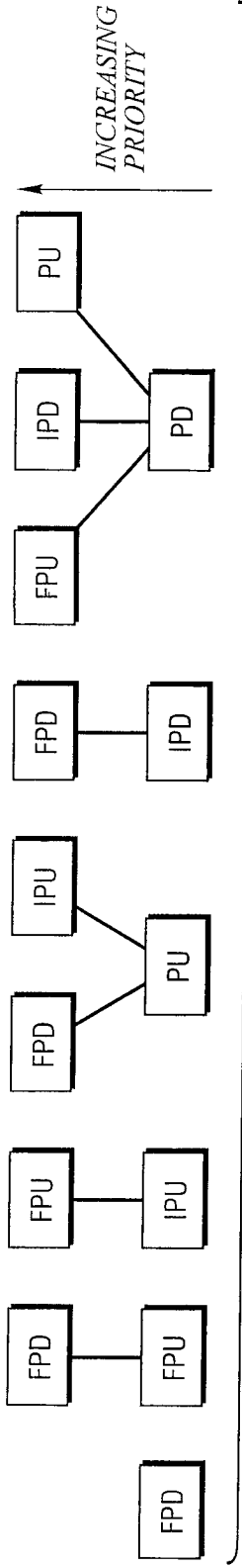
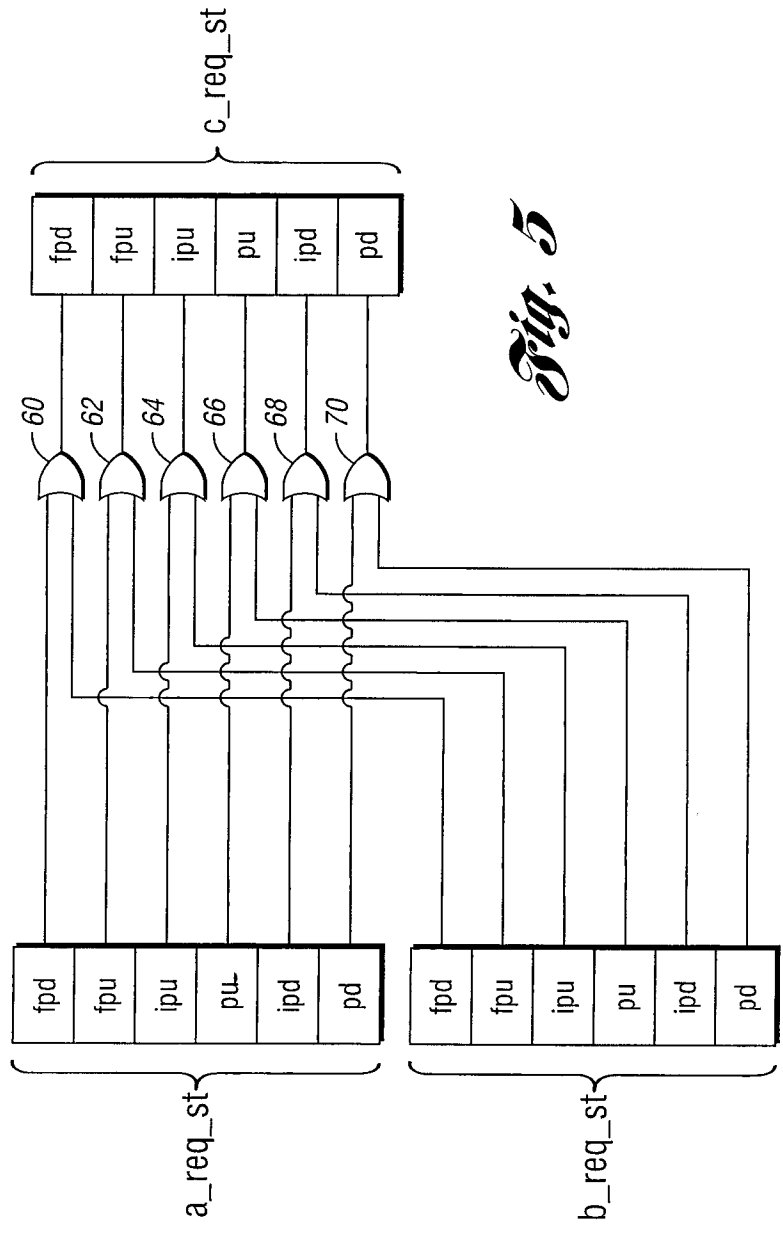


Request	Desired Action with Engine On	Desired Action with Engine Off	Desired State Machine Transition
FPD	Turn Engine Off	Keep Engine Off	<pre> graph LR     S1((eng_st = 1)) --&gt; S0((eng_st = 0))     S0 --&gt; S0 </pre>
FPU	Keep Engine On	Turn Engine On	<pre> graph LR     S1((eng_st = 1)) --&gt; S1     S0((eng_st = 0)) --&gt; S1 </pre>
IPU	Passive	Keep Engine Off	<pre> graph LR     S1((eng_st = 1))     S0((eng_st = 0)) --&gt; S0 </pre>
PU	Keep Engine On	Turn Engine On	<pre> graph LR     S1((eng_st = 1)) --&gt; S1     S0((eng_st = 0)) --&gt; S1 </pre>
IPD	Keep Engine On	Passive	<pre> graph LR     S1((eng_st = 1)) --&gt; S1     S0((eng_st = 0)) </pre>
PD	Turn Engine Off	Keep Engine Off	<pre> graph LR     S1((eng_st = 1)) --&gt; S0((eng_st = 0))     S0 --&gt; S0 </pre>

*Fig. 3*



*Fig. 4*



*Fig. 5*

*Fig. 6*

